**HOMEWORK 3,**
**October, 4 2020**

**1.** Compute:

a) $\frac{3}{4} \cdot \frac{2}{3} =$ b) $\frac{5}{9} \cdot \frac{3}{15} =$ c) $\frac{9}{20} \cdot \frac{10}{27} =$

d) $\frac{9}{2} \div \frac{21}{2} =$ e) $6 \div \frac{2}{3} =$ f) $7 \div \frac{14}{3} =$

**2.** Compute:

a) $-7-(-9) =$ b) $15+(-34) =$ c) $12-(-8) =$

d) $2.5-(-4) =$ e) $-4.87-(-3.2) =$ f) $-9.5-10.7 =$

**3.** Compute. (*Before you are going to multiply these fractions, think if there is a short cut*)

a) $\frac{2}{3} \cdot \frac{3}{5} \cdot \frac{5}{11} \cdot \frac{11}{15} \cdot \frac{15}{19} \cdot \frac{19}{27} =$

b) $2\left(1-\frac{1}{2}\right)+3\left(1-\frac{1}{3}\right)+4\left(1-\frac{1}{4}\right) =$

**4.** Simplify the following expressions:

a) $-5(x+3)+4(x-2)-(2x+1) =$

b) $0.2(6a-5)-4(0.2a-2) =$

c) $\frac{3}{4}\left(\frac{4}{3}x-4\right)-8\left(2\frac{1}{4}x+\frac{3}{8}\right) =$

d) $\frac{1}{3}(0.3y-0.6)-\frac{1}{4}(0.4y-0.8) =$

e) $\frac{6}{13}(-26n - 39a + 13) - 10n + 9 =$

f) $\frac{2}{3}\left(\frac{3}{4}a - 3\right) + \frac{1}{2}a - (-4a - 6) - 17a + 5 =$

**5.** Solve to find the value of each variable:

**a)** $3(y - 5) - 2(y - 4) = 8$

**b)** $\frac{1}{3}(3x - 6) - \frac{2}{7}(7x - 21) = 9$

**c)** $0.5x + 3 = 0.2x$

**d)** $\frac{7}{9}x + 3 = \frac{2}{3}x + 5$

**e)** $2a - 6\frac{1}{4} = \frac{3}{4}x + 7\frac{1}{2}$

**f)** $-3.2n + 4.8 = -2(1.2n + 2.4)$

**Write an equation to solve each of the following word problems:**

**6.** A dog weighs 2 pounds more than a cat. 3 cats and 4 dogs together weigh 43 pounds. How much does a dog weigh? How much does a cat weigh?

**7.** A father is twice as old as his son. The sum of their ages is 48 years. How old is each of them?

**8.** For every $3 Marisa spends, Andie spends $5. Andie spends $120 more than Marisa does. How much does Andie spend?

**Solve the following problem any way you like (you do not have to write an equation.):**

**9.** * Divide the number 29 into three integer parts so that, if we add 1 to the first part, 2 to the second part, and 4 to the third part, you will get consecutive numbers.